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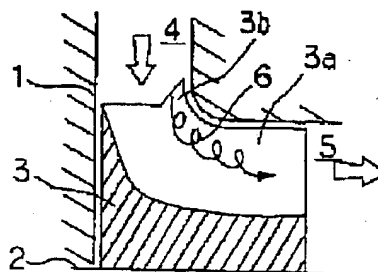
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TITLE : TURBINE



ABSTRACT : PROBLEM TO BE SOLVED: To restrain peeling caused on an impeller of a turbine, to maintain efficiency in an extensive flow rate region and to miniaturize the turbine by providing the impeller having a vane provided with an overhung part or a cutout part having an angle of sweep back on a front edge.

SOLUTION: Exhaust gas from an engine flows in a turbine casing 1 and flows in a turbine impeller 3 through a scroll 4. At the time when a turbine is driven at a design point, a relative inflow angle and an inlet blade angle of exhaust gas to the impeller 3 coincide with each other, and exhaust gas smoothly flows along an impeller vane 3a. At the time when the turbine is driven separated from the design point, there is made a difference between the relative inflow angle and the inlet blade angle, and when a flow flows in a front edge of the impeller 3a at a large angle of attack, a vortex growing from an overhung part 3b having an angle of sweep back or a cutout part is a screw type vertical vortex in parallel with the flow, and a central axis is in parallel with the flow. This vortex flow 6 strong and stable, supplies a flow high in total pressure to peeling caused on the overall vane and restrains a scale of peeling small.

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